

REMARKS

Claims 1-20 are pending. Reconsideration and issuance of a Notice of Allowance are respectfully requested.

Applicant thanks the Examiner for indicating the allowability of claim 7 and allowance of claims 11-18.

Claims 19 and 20 are rejected under 35 USC 112, second paragraph, as being indefinite. Claims 19 and 20 were rejected as indefinite as not providing for a single statutory class of invention. Claims 19 and 20 are standard computer-readable medium claims reciting a computer readable medium that comprises instructions (*e.g.*, software) for performing a recited process. These claims are directed to a single statutory class, an article of manufacture. Such article of manufacture is a computer-readable medium and has instructions on it that perform the recited steps when executed. Such claims are acceptable by PTO guidelines. See MPEP 2106 Patentable Subject Matter - Computer Related Inventions. Withdrawal of this rejection is respectfully requested.

Claims 1-6, 8-10, 19 and 20 are rejected under 35 U.S.C. 102 (b) as being anticipated by Japanese Reference (2001-305118) to Shimomura ("Shimomura"). Applicant respectfully traverses this rejection since each and every element of claims 1-6, 8-10, 19 and 20 are not expressly or inherently described in Shimomura.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); see also MPEP § 2131. "The identical invention must be shown in as complete detail as is contained in the ... claim." Richardson v. Suzuki Motor Co., 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

For example, Shimomura does not expressly or inherently describe wherein the inlet includes an inlet-pressure set-point that can be set to a negative pressure set-point representing a pressure below ambient pressure as recited in claim 1. In his response to arguments, the Examiner made clear that he is treating the feature "can be set to a negative pressure set-point" as a functional limitation. Applicant respectfully disagrees. This feature requires that the inlet-pressure set-point be capable of being set to a negative pressure set-point. Applicant specifically chose the phrase "can be" to connote such a structural limitation, not a function. Consequently, this is a structural limitation, not a functional limitation. If a device is not capable of having its inlet-pressure set-point set to a negative pressure set-point, then it does not have the same structure

as recited in claim 1. Shimomura is not capable of having an inlet-pressure set-point set to a negative pressure set-point and, therefore, does not have the same structure as recited in claim 1. There is no disclosure in Shimomura that the “a preset threshold S” can be set to a negative pressure set-point representing a pressure below ambient pressure. There is no discussion in Shimomura, in the sections cited by the Office Action or elsewhere, of setting threshold S to a negative pressure set-point. That output value P may exceed threshold S does not disclose that threshold S can be set to a negative pressure set-point. In order to be capable of having an inlet-pressure set-point set to a negative pressure set-point, Shimomura must have (a) firmware capable of accepting a negative inlet-pressure set-point and (b) hardware that enables a inlet-pressure reading below ambient. Like all other such prior art systems today, Shimomura does not describe such firmware or hardware. Consequently, Shimomura does not describe a negative inlet-pressure set-point and is not capable of being set to a negative inlet-pressure set-point.

Indeed, while Shimomura does disclose a vacuum pump at the output, there is no express or inherent description in Shimomura that an inlet-pressure set-point can be set to a negative pressure set-point. Indeed, all that a vacuum pump, such as in Shimomura, requires is that the outlet of the column can be at any pressure below the inlet pressure for the flow in the column to be from inlet towards the outlet. It is standard in the industry for the input to the column to be controlled at a gauge pressure above ambient. As stated above, Shimomura does not disclose or discuss inlet pressures below ambient. Since Shimomura does not disclose this feature, Shimomura fails to disclose each and every element of claim 1. Claim 1 is allowable for at least this reason. Allowance of claim 1 is respectfully requested.

Dependent claims 2-6 and 8-10 are allowable for at least these reasons and the independent features they recite. For example, Shimomura does not disclose “wherein the GC includes instructions on a computer-readable medium,” as recited in claim 5. Comparator 12 is simply a comparison circuit that generates a signal to operate alarm circuit if P exceeds S. There is no express or inherent teaching that comparator 12 includes instructions on a computer readable medium. Comparator may be simply a hard-wired circuit - there is no suggestion or teaching that it is a computer. Furthermore, comparator 12 merely generates a signal and does not set an inlet pressure set point or drive the valve. Likewise, Shimomura does not disclose “a computer, connected to the GC” as recited in claim 10. Indeed, the Office Action rejects this claim without any citation to Shimomura for support. Shimomura does not disclose the independent features recited in the dependent claims. Allowance of claims 2-6 and 8-10 is respectfully requested.

Furthermore, Shimomura does not expressly or inherently describe:

receiving a desired negative pressure set-point representing a pressure below ambient pressure; and
setting an inlet pressure set-point to the desired negative pressure set-point, wherein the desired negative pressure set-point indicates a desired negative inlet pressure for an inlet of the GC,

as recited in claim 19. As discussed above, Shimomura does not disclose a negative pressure set-point, let alone setting inlet pressure set point to the desired negative pressure set-point. As stated above, the threshold S is not expressly or inherently described anywhere in Shimomura as being a negative pressure set point. Further, Shimomura does not disclose "receiving" the threshold S. Rather, as set forth in Shimomura, the threshold S is "preset" not received. Consequently, Shimomura does not disclose each and every element of claim 19. Therefore, claim 19 are allowable for at least these reasons. Allowance of claim 19 is respectfully requested.

Moreover, as set forth above, Shimomura does not disclose a computer-readable medium comprising instructions, as set forth in claim 19. Nowhere does Shimomura provide any disclosure or description that it includes anything more than a simple comparator and alarm circuit to determine if output value P exceeds preset threshold S and to curtail flow rate. There is no discussion of a computer program operating in Shimomura. Claim 19 is further allowable for at least this reason.

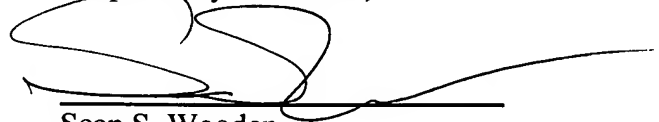
Again, the Examiner remarks show that he is treating the elements of claim 19 as functional limitations. Again, Applicant respectfully disagrees. The elements recited in claim 19 are structural limitations. If a computer readable medium does not have instructions for performing the steps listed, it does not have the same structure as claim 19. In other words, the computer readable medium must have such instructions on it. A computer readable medium without such instructions or with different instructions does not have the same structure as recited in claim 19. It is settled that instructions stored on a computer readable medium do affect the structure of the computer readable medium. See MPEP 2106 Patentable Subject Matter - Computer Related Inventions. Shimomura does not describe such a structure. Consequently, this rejection should be withdrawn.

In view of the above remarks, Applicant respectfully submits that the application is in condition for allowance. Prompt examination and allowance are respectfully requested.

Should the Examiner believe that anything further is desired in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicant's undersigned representative at the telephone number listed below.

Date: August 7, 2006

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'S. Wooden', written over a horizontal line.

Sean S. Wooden
Registration No. 43,997
Andrews Kurth LLP
1350 I Street, N.W.
Suite 1100
Washington, DC 20005
Tel. (202) 662-2738
Fax (202) 662-2739